

## 1. WORKSESSION

### 2. Public Comments

### 3. 6:00 P.M. Mosquito Control Program - Discussion

Mosquito Control Packet Contains:

- Cover Sheet/Detailed Description of Proposed Program
- CDC - Joint Statement on Mosquito Control in the United States
- City of Laramie, Parks & Recreation Department, IPM report on 2015 Mosquito Control Program.

Documents: [COUNCIL WORK SESSION AGENDA COVER - MOSQUITO CONTROL OPTIONS FINAL 1-18-16.PDF](#), [JOINT STATEMENT ON MOSQUITO CONTROL CDC 1-18-16.PDF](#), [ADVISORY BOARD PRESENTATION 2015 MOSQUITO PROGRAM.PDF](#)

### 4. Upcoming Council Meetings

Documents: [JAN-26-16.DOC](#)

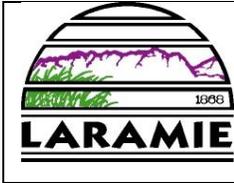
### 5. Future Work Session Topics

Documents: [1-26-2016.DOC](#)

### 6. City Council Updates/Council Comments

### 7. Agenda Review

### 8. Public Comments



Agenda Item: Discussion Item

Title: Discussion of the Mosquito Control Program

**Recommended Council MOTION:**

Discussion Item and Public Hearing

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**Administrative or Policy Goal:**

City Council Goal: Maintain Laramie's Safe, Healthy Environment and Ensure Adequate Resources to Protect General Welfare.

Department Objective: The implementation of the City's 2010 West Nile Virus Protection Plan. Provide quality parks and recreation opportunities for residents and visitors to the City; Develop infrastructure to enhance existing parks and recreation facilities and amenities for residents and visitors to the City.

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**Background:**

At the September 9, 2015 Parks, Tree and Recreation Advisory Board meeting, staff was directed to prepare multiple options for the Mosquito Control Program and potential outcomes. To this end, staff prepared eight (8) general options for consideration by the Parks, Tree and Recreation Advisory Board with public input on October 14, 2015. The intent was to gather feedback from the public and the Parks, Tree and Recreation Advisory Board on these options and narrow the field of eight (8) options to three (3) for staff to prepare estimate specifics on costs, efficacy and details on what the program would consist of with each option for consideration by Council.

On November 10, 2015 Council held a work session to discuss three potential options that were selected from a group of eight options recommended by the Parks, Tree, and Recreation Advisory Board. Council members debated the presented options and directed staff to develop a program that is more environmentally friendly than our current program without sacrificing our current efficacy on treated acres, along with the associated fee increase for their consideration.

At the January 13, 2016 Parks, Tree and Recreation Advisory Board meeting, staff presented the following **alternative program** for review and discussion by the public and the Parks, Tree and Recreation Advisory Board. Please note that the Parks, Tree and Recreation Advisory Board did not approve the Resolution in support of the **alternative program**. The staff have provided further details of the discussion from the Parks, Tree and Recreation Advisory Board meeting at the end of the details of the **alternative program** for further edification.

**The alternative mosquito control program** is estimated at approximately 95% efficacy on treated acres (same as current program).

- **The alternative program** would consist of ground based larval BTi applications and between one and seven (1-7) aerial larval treatments. Two of those treatments would be made using granular

larvicides. The current program utilizes the same ground based larval applications and one (1) aerial larval application.

- **The alternative program** would consist of ground based fogging in town using a reduced risk insecticide and one aerial treatment outside the City limits with an organophosphate pesticide.
- **The alternative program** would include a contingency/emergency operations fund.

The specific details of the **alternative program** are as follows:

- **Ground based larval mosquito control:** Ground based larval control utilizing hand application equipment and ATV units would remain at the current level. This component provides larval control in urban areas and on smaller rural acreages. This program component will also continue to provide the mobility to accomplish surveillance for aerial operations and spot treatments in rural areas. No change in the current program is anticipated in this area. **This program component remains budget neutral.**
- **Aerial BTi larval control liquid:** The acres controlled with liquid larval aerial applications would increase in this plan from the current 3,790 acres annually to a maximum of 10,000 acres annually treated at optimum intervals to maximize efficacy. Aerial larval control with liquid Bti currently costs \$9.70 per acre. The current cost for the aerial BTi averages \$36,800. **An increase in BTi larval acres from 3,790 to 10,000 would require an additional \$60,250 annually.**
- **Aerial larval control granular BTi:** Granular aerial larvicide applications are more expensive than liquid applications because of multiple factors including: the specialized application equipment, narrow swath width, and cost of the granular products. The estimated cost for the contractor to perform the application is \$8.00 per acre. The larval control product is estimated to cost \$18.00 per acre, for a total cost of \$26.00 per acre. Aerial granular larvicides are a new addition to the program. This application product is targeted to treat larvae in habitats that have heavy overgrowth of grasses or other plant material that cannot be penetrated with liquid formulations. Current equipment and staffing levels are appropriate to handle loading granular larvicides, and no change in the normal operations or schedule is anticipated. **Treatment of 3,000 acres with granular larvicide would require an additional \$78,000 annually.**

No change  
No additional  
cost to the  
program

Additional  
Aerial Larval  
treatments  
  
An additional  
\$60,250

New: Aerial  
Granular  
Larval  
Treatments  
  
An additional  
\$78,000

- Ground based adult control (fogging):** The ground based adult control fogging operations would be altered to utilize Zenivex as the control agent replacing the current combination of Permethrin and Pipronyl butoxide (PBO.) Zenivex uses the active ingredient Etofenprox and is a member of the pyrethroid family but requires no Pipronyl Butoxide as a synergist to help the insecticide perform its function. Zenivex is currently in use in our program as the adult control agent used in the Casper Aquifer Protection Overlay area. Zenivex is recognized by the Environmental Protection Agency as a “Reduced Risk Pesticide.” Over the past 3 years the program utilized an average of 715 gallons of product at an average cost per gallon of \$16.92 for an annual total of \$12,000. 715 gallons of Zenivex at \$80.75 per gallon would cost \$57,800. The difference between the costs is approximately \$46,000. Current staffing and equipment are suitable for the application of Zenivex. **Replacement of the Permethrin + PBO with Zenivex would require an additional \$46,000 annually.**
- Aerial Adult control:** The aerial adult control would remain at the current level. It should be noted that in order to maintain efficacy of approximately 95% on acres treated, the potential application of organophosphate pesticide is likely required and therefore essential. Currently, aerial application with Dibrom costs \$0.82 per acre for contractor application and 0.70 per acre for chemical for a total cost of \$1.52 per acre. Historically 15,360 acres are treated at a cost of \$23,350. **This program component remains budget neutral.**
- Contingency/Emergency Operations Fund:** This additional option would be utilized to allow and permit immediate response to unforeseen conditions such as: late season adult vector control; impending West Nile Virus outbreak; severe flooding producing excess mosquito habitat; immediate need of additional provisional staff to mitigate conditions; etc. **Addition of a Contingency/Emergency Fund would require an additional \$25,000 annually.**

New: Reduced Risk Adult Control Fogging Product  
  
An additional \$46,000

No Change  
  
No additional cost to the

Contingency/ Emergency Fund  
  
An additional \$25,000

**The alternative program would require a total expense budget of \$634,250** to incorporate the more environmentally friendly control agents and application methods while maintaining the same efficacy on treated acres.

At the direction of previous Councils, the Mosquito Control expense operations should be wholly supported and offset with utility account fees, cooperative agreements, and grant revenue. With this being the case, to support the **alternative program** options the following revenue streams are required to support the operational expense:

Utility account fee at \$4.89 per month based upon 9,100 accounts:	\$533,988
Cooperative Agreement with Albany County Weed and Pest:	\$ 40,000
Emergency Insect management Grant for WNV prevention:	<u>\$ 60,000</u>
<b>Total Mosquito Control Program revenue required:</b>	<b>\$633,988</b>

The **alternative program** would require a monthly fee of \$4.89 based on 9,100 households. The current monthly mosquito control fee is \$2.57. To fund the **alternative program** with more environmentally friendly pesticides while maintaining the current program efficacy, would result in a 90% increase in the monthly mosquito control fee.

Formulating the budget for this **alternative program** assumes the continued availability of grant funding to the City through the Wyoming Department of Agriculture; Emergency Insect Management Grant program. This program is currently supported in Governor Mead’s preliminary state budget but has not been approved by the full legislature. If this program is not renewed, the City would need to make up approximately \$60,000 annually in funds directly related to the prevention of West Nile virus. This would result in an additional fee of \$0.55 per user, per month.

With any IPM based program, timing of applications is critical to control the pest. Surveillance operations are necessary to determine what stage the pest is currently in, and when, and what method will give the best control. Occasionally no control is warranted based on the stage of development and abundance of the pest. Access to additional resources does not necessarily mean that these resources will all be used in any single season, but it does give the program the operational tools to provide control based on best science. Each individual application is evaluated to determine if it is needed to reach the stated goals of the program.

Over the last 25 years of operation, this program has used organophosphate insecticides to control adult mosquitoes in each season. Staff has evaluated other options and control methods and determined that the same level of control or efficacy cannot be achieved without the use of these products.

The resolution supporting the alternative program failed by a vote of 0-7 by the Parks, Tree and Recreation Advisory Board, therefore there is no recommendation from the Parks, Tree and Recreation Advisory Board on the **alternative program**. Through continuing discussion with Parks, Tree and Recreation Advisory Board members and the Council Liaison, Councilor Weaver, staff believes it would be appropriate to forward information related to the main discussion from the Parks, Tree and Recreation Advisory Board on the **alternative program**. This discussion was mostly related to the additional cost associated with the increased acres treated with the aerial liquid Bti for larval control (\$60,250) and the addition of aerial larval control granular Bti for late season larval control (\$78,000). These proposed revisions would likely reduce the environmental friendliness of the **alternative program** and would likely only slightly reduce efficacy rates on treated acres.

The removal of these proposed changes that were discussed by the Parks, Tree and Recreation Advisory Board would result in the following **REVISED** costs associated with the **alternative program**:

**The REVISED alternative program detailed above would require a total expense budget of \$495,738** to incorporate the more environmentally friendly control agents and application methods while maintaining the same efficacy on treated acres.

Utility account fee at \$3.62 per month based upon 9,100 accounts:	\$395,738
Cooperative Agreement with Albany County Weed and Pest:	\$ 40,000
Emergency Insect management Grant for WNV prevention:	<u>\$ 60,000</u>
<b>Total Mosquito Control Program revenue required:</b>	<b>\$495,738</b>

The staff would also like to clarify that the 2016 **alternative program** would likely be a hybrid of the previous program and the **alternative program**, if approved and adopted. The reason for this is that the **alternative program** revenue, if approved by ordinance with three readings will not be fully realized for use during the 2016 season. The staff anticipates that the 2017 **alternative program** would likely be fully funded other than the contingency/emergency operations fund as proposed.

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**Legal/Statutory Authority:**

Chapter 13.52, Section 13.52.010 of the Laramie Municipal Code

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**BUDGET/FISCAL INFORMATION:**

N/A

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**Responsible Staff:** Paul Harrison, Parks and Recreation Director at 721-5260, Todd Feezer, Assistant Director of Parks and Recreation at 721-5348, David Schott, Parks Manager at 721-5264, Keith Wardlaw, Mosquito Control Supervisor at 721-5258.

**Attachments:** Joint Statement on Mosquito Control on the United States; 2015 Mosquito Control Program Overview power point presentation

\_\_\_\_\_ City Manager    \_\_\_\_\_ City Attorney    \_\_\_\_\_ **Parks & Recreation**

# Joint Statement on Mosquito Control in the United States

## Joint Statement on Mosquito Control in the United States from the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control and Prevention (CDC)

Current as of: September 2012

On this page:

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- [Mosquito Life Cycle](#)
- [Mosquito Control Programs](#)
- [Integrated Pest Management](#)
- [Education](#)
- [For More Information](#)

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### The Role of Government Agencies and the Public

Mosquito-borne diseases are among the world's leading causes of illness and death today. The World Health Organization estimates that more than 300 million clinical cases each year are attributable to mosquito-borne illnesses. Despite great strides over the last 50 years, mosquito-borne illnesses continue to pose significant risks to parts of the population in the United States. Current challenges posed by the emergence of West Nile virus in the Western hemisphere illustrate the importance of cooperation and partnership at all levels of government to protect public health. The Environmental Protection Agency (EPA, the Agency) and the Centers for Disease Control and Prevention (CDC) are working closely with each other and with other federal, state, and local agencies to protect the public from mosquito-borne diseases such as the West Nile virus.

CDC, working closely with state and local health departments, monitors the potential sources and outbreaks of mosquito-borne diseases and provides advice and consultation on prevention and control of these diseases. CDC works with a network of experts in human and veterinary medicine, entomology, epidemiology, zoology, and ecology to obtain quick and accurate information on emerging trends which they develop into national strategies that reduce the risk of disease transmission.

EPA ensures that state and local mosquito control departments have access to effective mosquito control tools that they can use without posing unreasonable risk to human health and the

environment. EPA encourages nonchemical mosquito prevention efforts, such as eliminating standing water that provide breeding sites. The Agency educates the public through outreach efforts to encourage proper use of insect repellents and mosquitocides. Additionally, EPA's rigorous pesticide review process is designed to ensure that registered mosquitocides used according to label directions and precautions can further reduce disease-carrying mosquito populations.

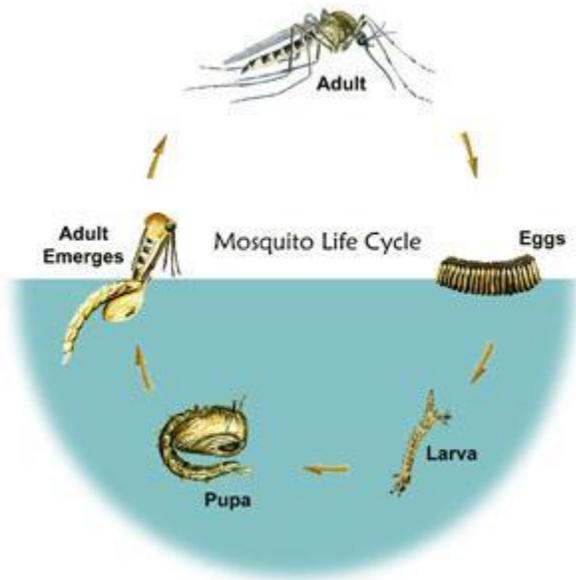
State and local government agencies play a critical role in protecting public health from mosquito-borne diseases. They serve on the front line, providing information through their outreach programs to the medical and environmental surveillance networks that first identify possible outbreaks. They also manage the mosquito control programs that carry out prevention, public education and vector population management.

The public's role in eliminating potential breeding habitats for mosquitoes -- such as getting rid of any standing water around the home -- is a critical step in reducing the risk of mosquito-borne disease transmission. The public is also encouraged to make sure window screens and screen doors are in good repair. When venturing into areas with *high* mosquito populations, the public should wear personal protection such as long sleeve shirts and long pants, preferably treated with a repellent.. People should use mosquito repellents when necessary, and always follow label instructions.

## **Diseases Transmitted by Mosquitoes**

Mosquitoes are found throughout the world and many transmit pathogens which may cause disease. These diseases include mosquito-borne viral encephalitis, dengue, yellow fever, malaria, and filariasis. Most of these diseases have been prominent as endemic or epidemic diseases in the United States in the past, but today, only the insect-borne (arboviral) encephalitides occur annually and dengue occurs periodically in this country. The major types of viral encephalitis in the United States include St. Louis, LaCrosse, Eastern equine and Western equine. These viruses are normally infections of birds or small mammals. During such infections, the level of the virus may increase in these infected animals facilitating transmission to humans by mosquitoes. The West Nile virus, which can also cause encephalitis, was found in the northeastern United States for the first time in 1999, is a good example of this mode of transmission. Human cases of encephalitis range from mild to very severe illnesses that, in a few cases, can be fatal. Dengue is a viral disease transmitted from person to person by mosquitoes. It is usually an acute, nonfatal disease, characterized by sudden onset of fever, headache, backache, joint pains, nausea, and vomiting. While most infections result in a mild illness, some may cause the severe forms of the disease. Dengue hemorrhagic fever, for example, is characterized by severe rash, nosebleeds, gastrointestinal bleeding and circulatory failure resulting in dengue shock syndrome and even death. Dengue is endemic in the Caribbean, Central and South America. Recently, dengue has occurred with increasing frequency in Texas. Other pathogens transmitted by mosquitoes include a protozoan parasite which causes malaria, and *Dirofilaria immitis*, a parasitic roundworm and the causative agent of dog heartworm. Disease carrying mosquito species are found throughout the U.S., especially in urban areas and coastal or in inland areas where flooding of low lands frequently occurs.

## Mosquito Life Cycle



The life cycle of all mosquitoes consists of four distinct life stages: egg, larva, pupa and adult. The first three stages occur in water, but the adult is an active flying insect that feeds upon the blood of humans and/or animals. The female mosquito lays the eggs directly on water or on moist substrates that may be flooded with water. The egg later hatches into the larva, the elongated aquatic stage most commonly observed as it swims in the water. The larva transforms into the pupa where internal changes occur and the adult mosquito takes form. After two days to a week in the pupal stage, the adult mosquito emerges onto the water's surface and flies away. Only the female mosquito takes blood which they usually require for her eggs to develop.

The practice of mosquito control focuses on the unique biology and behavior of the mosquito species of concern. Mosquito biology can follow two general scenarios. The first involves those species that lay their eggs in masses or rafts on the water's surface. Some of these species, which are found throughout the U.S., often lay their eggs in natural or artificial water-holding containers found in the domestic environment, or in naturally occurring pools. The second scenario involves mosquitoes that lay their eggs on moist soil or other substrates in areas that will be flooded with water later. After about two days, these eggs are ready to hatch, but if not flooded, can withstand drying for months. In inland areas of the U.S. where these mosquitoes breed, heavy rains and flooding can produce millions of mosquitoes in a short time. Similar situations occur along coastal areas with mosquitoes adapted to salt marsh habitats. Some salt marsh mosquitoes are strong fliers and can sometimes travel up to 50 miles from the breeding site.

## Mosquito Control Programs

In response to these potential disease carrying pests, communities organized the earliest mosquito control programs in the eastern U.S. in the early 1900s. Eventually, other communities

created similar programs throughout the country in areas where mosquito problems occurred and where citizens demanded action by local officials. Modern mosquito control programs in the U.S. are multifaceted and include surveillance, source reduction, and a variety of larval and adult mosquito control strategies.

Surveillance methods include studying habitats by air, aerial photographs, and topographic maps, and evaluating larval populations. Mosquito control officials also monitor mosquito traps, biting counts, and complaints and reports from the public. Mosquito control activities are initiated once established mosquito threshold populations are exceeded. Seasonal records are kept in concurrence with weather data to predict mosquito larval occurrence and adult flights. Some mosquito control programs conduct surveillance for diseases harbored by birds, including crows, other wild birds, sentinel chicken flocks, and for these diseases in mosquitoes.

Source reduction involves eliminating the habitat or modifying the aquatic habitat to prevent mosquitoes from breeding. This measure includes sanitation measures where artificial containers, including discarded automobile tires, which can become mosquito habitats, are collected and properly disposed. Habitat modification may also involve management of impounded water or open marshes to reduce production and survival of the flood water mosquitoes. If habitat modification is not feasible, biological control using fish may be possible. Mosquito control officials often apply biological or chemical *larvicides*, with selective action and moderate residual activity, to the aquatic habitats. To have the maximum impact on the mosquito population, larvicides are applied during those periods when immature stages are concentrated in the breeding sites and before the adult forms emerge and disperse.

Some mosquitoes can fly from flood plains, coastal marsh areas, or protected habitats to impact urban residential areas. In these cases, it is often necessary to apply pesticides to kill adult mosquitoes. Surveillance data may prompt insecticide applications when mosquitoes are abundant. Applications usually coincide with the maximum adult mosquito activity in urban residential areas.

To be successful, mosquito control officials must apply insecticides under proper environmental conditions (e.g., temperature and wind) and at the time of day when the target species is most active. They must also apply these pesticides with carefully calibrated equipment that generates the proper-sized insecticide droplets that will impinge on adult mosquitoes while they are at rest or flying. If the droplets are too large, they will fall to the ground. If they are too small, the prevailing winds will carry them away from the target area. Once the insecticide spray mist dissipates, they break down in the environment (generally within 24 hours) producing little residual effect. Depending on the situation, mosquito control officials may safely apply these insecticides from spray equipment mounted on trucks, airplanes or helicopters. All insecticides used in the U.S. for public health use have been approved and registered by the EPA following the review of many scientific studies. The EPA has assessed these chemicals and found that, when used according to label directions, they do not pose unreasonable risk to public health and the environment.

Mosquito control officials have also developed water management strategies that take advantage of opportunities to maximize the impact of indigenous natural enemies to eliminate immature

mosquitoes. The EPA and CDC encourage the use of these practices wherever they are environmentally sound, effective, and reduce pesticide use.

## **Integrated Pest Management**

Mosquito control activities are important to the public health, and responsibility for carrying out these programs rests with state and local governments. The federal government assists states in emergencies and provides training and consultation in vector and vector-borne disease problems when requested by the states. The current interests in ecology and environmental impact of mosquito control measures, and the increasing problems that have resulted from insecticide resistance emphasize the need for "integrated" control programs. EPA and CDC encourage maximum adherence to *integrated pest management* (IPM). IPM is an ecologically based strategy that relies heavily on natural mortality factors and seeks out control tactics that are compatible with or disrupt these factors as little as possible. IPM uses pesticides, but only after systematic monitoring of pest populations indicates a need. Ideally, an IPM program considers all available control actions, including no action, and evaluates the interaction among various control practices, cultural practices, weather, and habitat structure. This approach thus uses a combination of resource management techniques to control mosquito populations with decisions based on surveillance. Fish and game specialists and natural resources biologists should be involved in planning control measures whenever delicate ecosystems could be impacted by mosquito control practices.

The underlying philosophy of mosquito control is based on the fact that the greatest control impact on mosquito populations will occur when they are *concentrated, immobile* and *accessible*. This emphasis focuses on habitat management and controlling the immature stages before the mosquitoes emerge as adults. This policy reduces the need for widespread pesticide application in urban areas.

EPA and CDC recommend that professional mosquito control organizations throughout the U.S. continue to use IPM strategies. Both agencies recognize a legitimate and compelling need for the prudent use of space sprays, under certain circumstances, to control adult mosquitoes. This is especially true during periods of mosquito-borne disease transmission or when source reduction and larval control have failed or are not feasible.

## **Education**

To be of maximum effectiveness, the people, for whom protection is provided, must understand and support mosquito control. An integral part of most organized mosquito control programs is public education. It is important that residents have a good understanding of mosquitoes, the benefits realized from their control and the role people have in preventing certain mosquito-borne diseases. Being aware of pesticide application times is also important for individuals so they may decide on precautions they may need to take. While this usually involves education of the public through announcements in the media, some control programs have staffs that develop and present educational programs in public schools. People who are informed about mosquito biology and controls are more likely to mosquito-proof their homes, and eliminate mosquito breeding places on their own property.

## For More Information

For more information about mosquito control in your area, contact your state or local health department. The Centers for Disease Control and Prevention is a source of information on disease control, and their Internet web site includes a listing of state health departments.

To contact the *Centers for Disease Control and Prevention (CDC)*:

Telephone: 970-221-6400

Fax: 970-221-6476

E-mail: [dybid@cdc.gov](mailto:dybid@cdc.gov)

web site: <http://www.cdc.gov>

Information on pesticides used in mosquito control can be obtained from the state agency which regulates pesticides, or from the *National Pesticide Information Center (NPIC)* West Nile Resource Guide <http://npic.orst.edu/pest/mosquito/wnv.html>. [Exit](#)

National Pesticide Information Center

1-800-858-7378 - daily except holidays. Callers outside normal hours can leave a voice mail message.

E-mail: [npic@ace.orst.edu](mailto:npic@ace.orst.edu)

Web site: <http://npic.orst.edu/> [Exit](#)

Information on mosquito control programs can also be obtained from the *American Mosquito Control Association (AMCA)* web site: <http://www.mosquito.org> [Exit](#) This site also lists many county mosquito agencies.

For more information regarding the federal pesticide regulatory programs, contact:

EPA *Office of Pesticide Programs*

[Ask a question](#)

Website: <http://www.epa.gov/pesticides>

# City of Laramie Mosquito Control



**Parks and Recreation Department**

**January 13, 2016**

# Mosquito Control 2015

- Early Season Activity
- Record flooding – effect on operation
- Larval surveillance and Control
- Adult surveillance and Control
- 2015 WNV activity
- Winter Projects

May 20-21 City of Laramie Mosquito and UW Extension Entomology Sponsored the 5<sup>th</sup> annual Wyoming Mosquito Management Association mosquito control training.



**28 New technicians trained**

The Big Laramie River was above “ Action Stage “  
for over 12 weeks during the season.



Moving water created serious access and safety issues  
for larval control operations and flooded one adult  
surveillance trapping site during this time frame

## Larval Control:

Control operations began in April with the first applications of BTI made on April 15.



Operations concluded September 25<sup>th</sup>. High vector counts and mild fall weather kept larval control operations busy late into the fall season.

Technicians made over 500 site visits during the season and made treatments as needed



# Contracted Aerial work to Vector Disease Control International

## Larval Aerial Application With Bti:

June 3rd - 4th - 4,400 acres



# Adult Surveillance

Adult mosquito trapping began on May 23

Last samples collected September 28



Crews collected, sexed, and speciated 2,560 total samples.

212,791 mosquitoes were inventoried.

# Adult mosquito control Fogging with Permanone RTU (Permethrin)

Started on June 10<sup>th</sup> – Completed August 25<sup>th</sup>

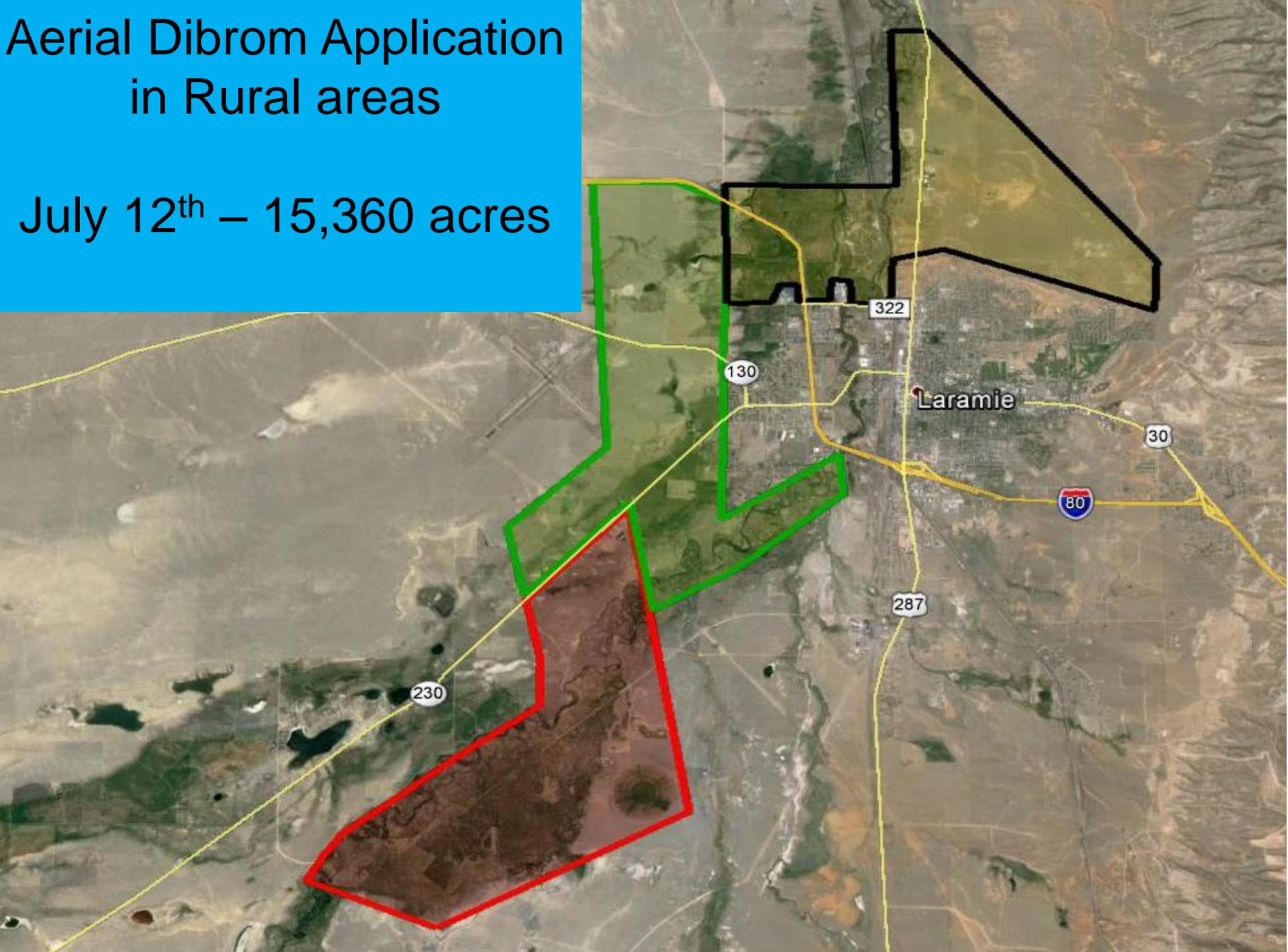


153 individual fogging applications

12 complete rotations through each quadrant plus additional vector targeted applications.

# Aerial Dibrom Application in Rural areas

July 12<sup>th</sup> – 15,360 acres



# RAMP Testing for West Nile Virus



Technicians Tested 122 mosquito pools and 2 crows during the season.

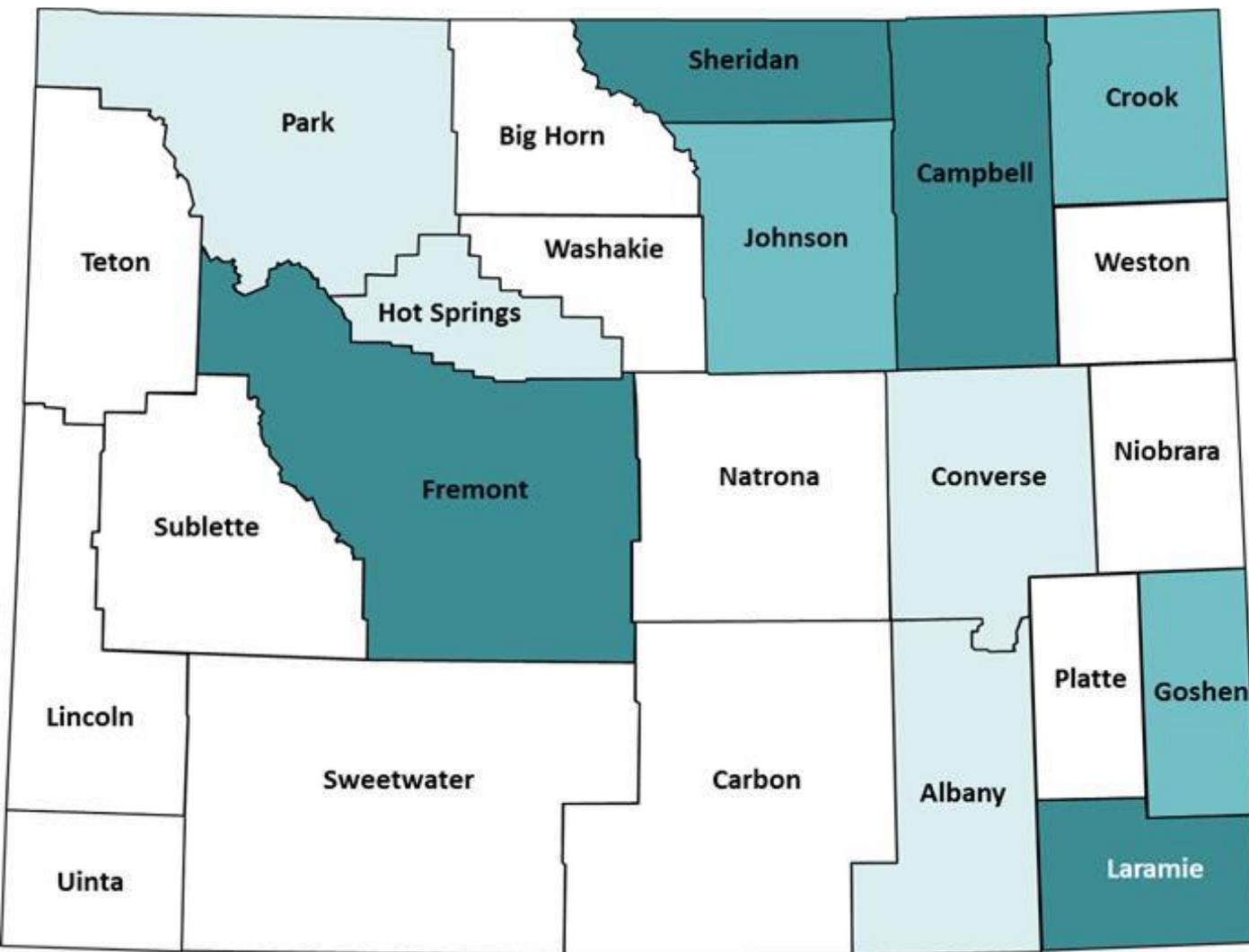
1 mosquito pool was positive for WNV in tests conducted August 6<sup>th</sup>.

Wyoming WNV Surveillance Summary, 2015

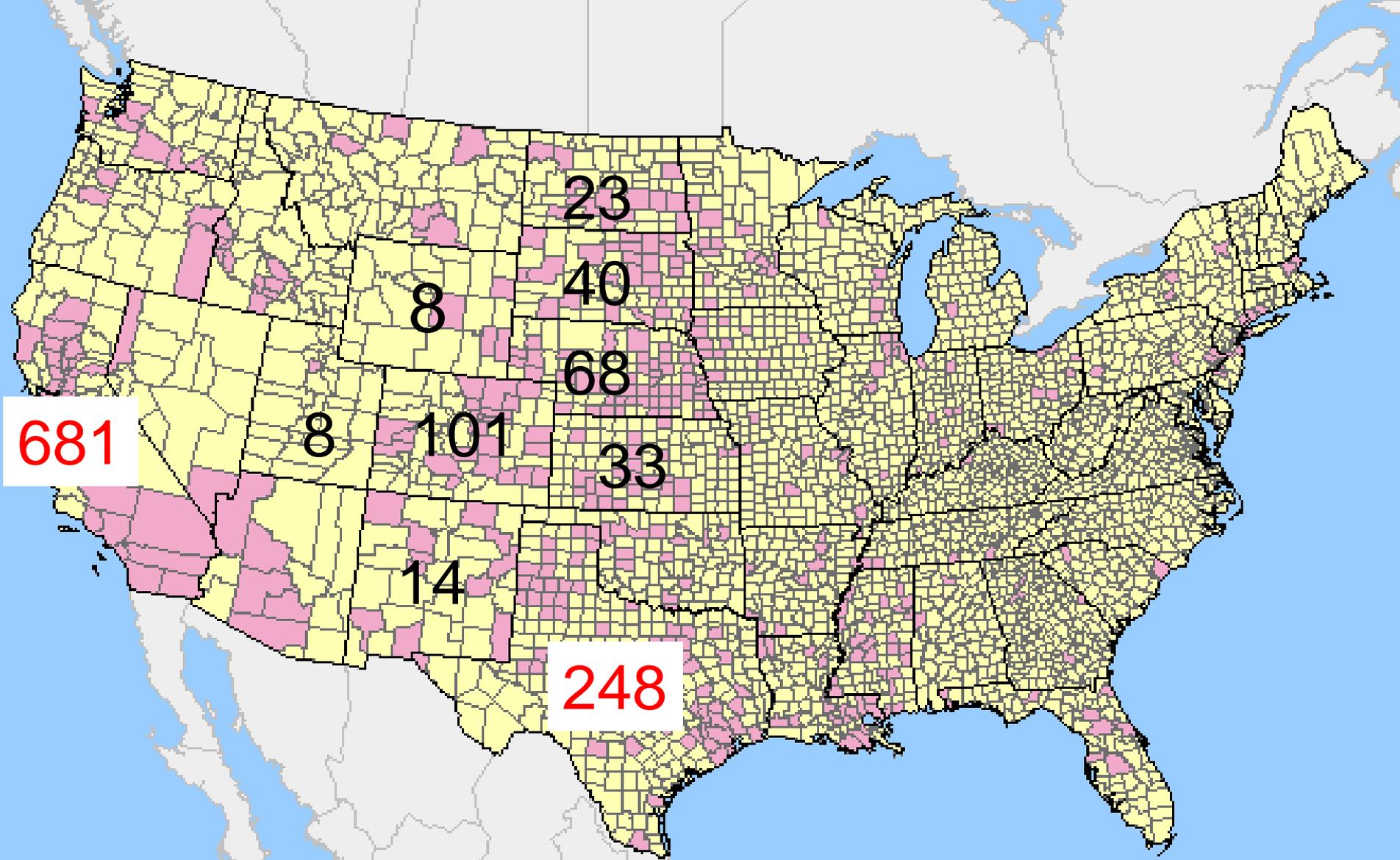
*County Specific Descriptive Statistics*

**Table 4.** West Nile Virus (WNV) activity by county in Wyoming, 2015. Presumptive viremic donor (PVD) is a person whom tested positive for West Nile Virus upon blood donor screening. PVDs are usually asymptomatic, are not included in human case counts, and are another indication of virus activity in an area. Counties not listed did not report West Nile Virus infections or surveillance activities.

County	Human Fever Cases	Human Neuroinvasive Disease Cases	Human Case Fatality	Presumptive Viremic Donors	Avian Cases	Equine Cases	Positive Mosquito Pools	Mosquito Pools Tested
Albany	0	0	0	0	1	0	1	122
Campbell	1	0	0	0	1	1		
Converse	0	0	0	0	0	1		
Crook	0	1	0	0	0	0		
Fremont	1	0	0	0	0	0	3	75
Goshen	2	0	0	0	0	0	0	25
Hot Springs	0	0	0	0	0	0	1	31
Johnson	0	1	0	0	0	0		
Laramie	0	1	0	0	0	1		
Natrona	0	0	0	0	0	0	0	8
Park	0	0	0	0	1	1		
Sheridan	1	0	0	0	1	0		
Teton	0	0	0	0	0	0	0	103
Uinta	0	0	0	0	0	0	0	97
<b>TOTAL</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>461</b>



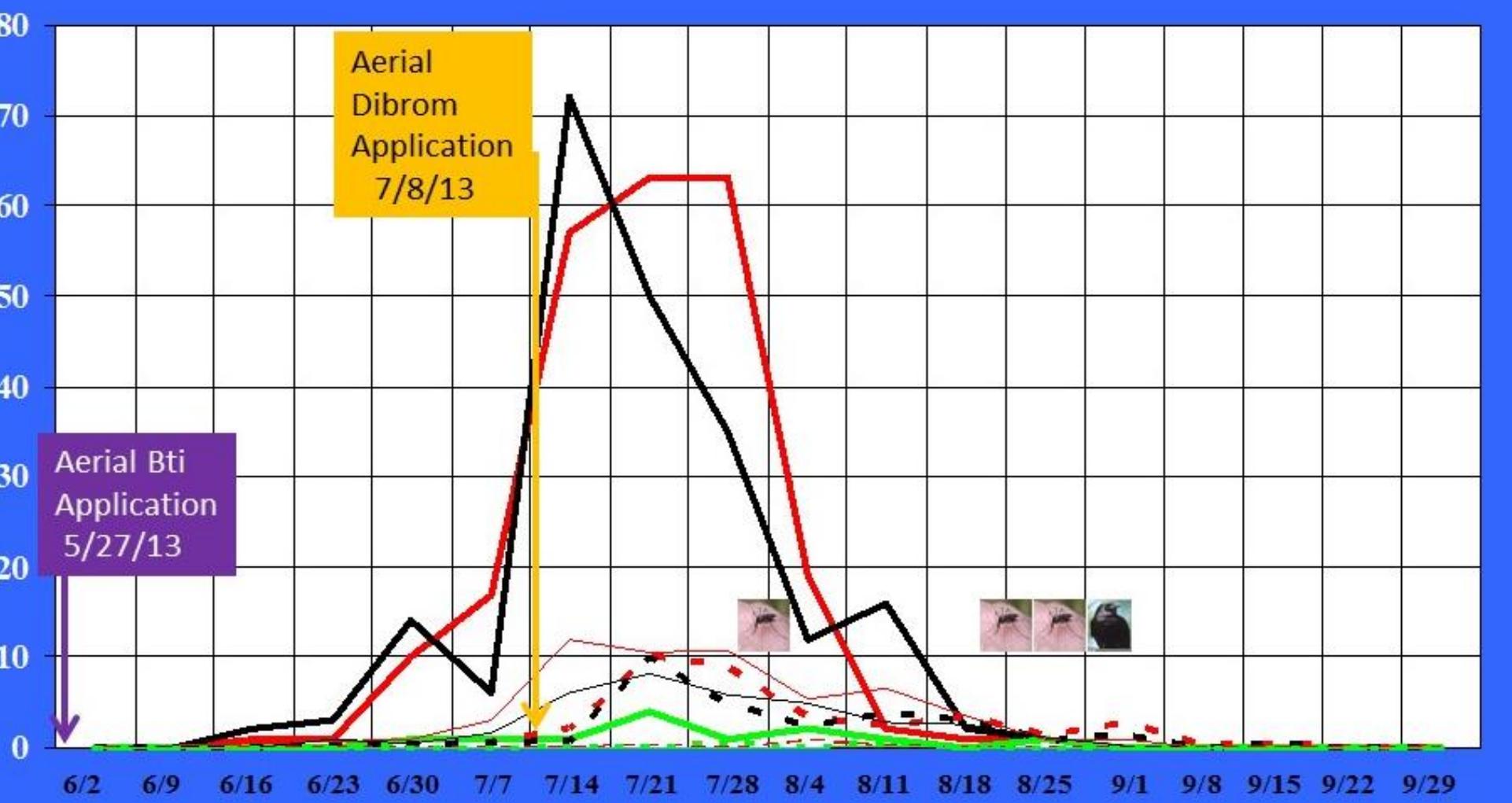
- No WNV Activity
- Non-Human WNV Activity<sup>h</sup>
- WNV Human Activity\*
- Both Human and Non-Human Activity



**NATIONWIDE 1,996 HUMAN CASES**

Two years ago

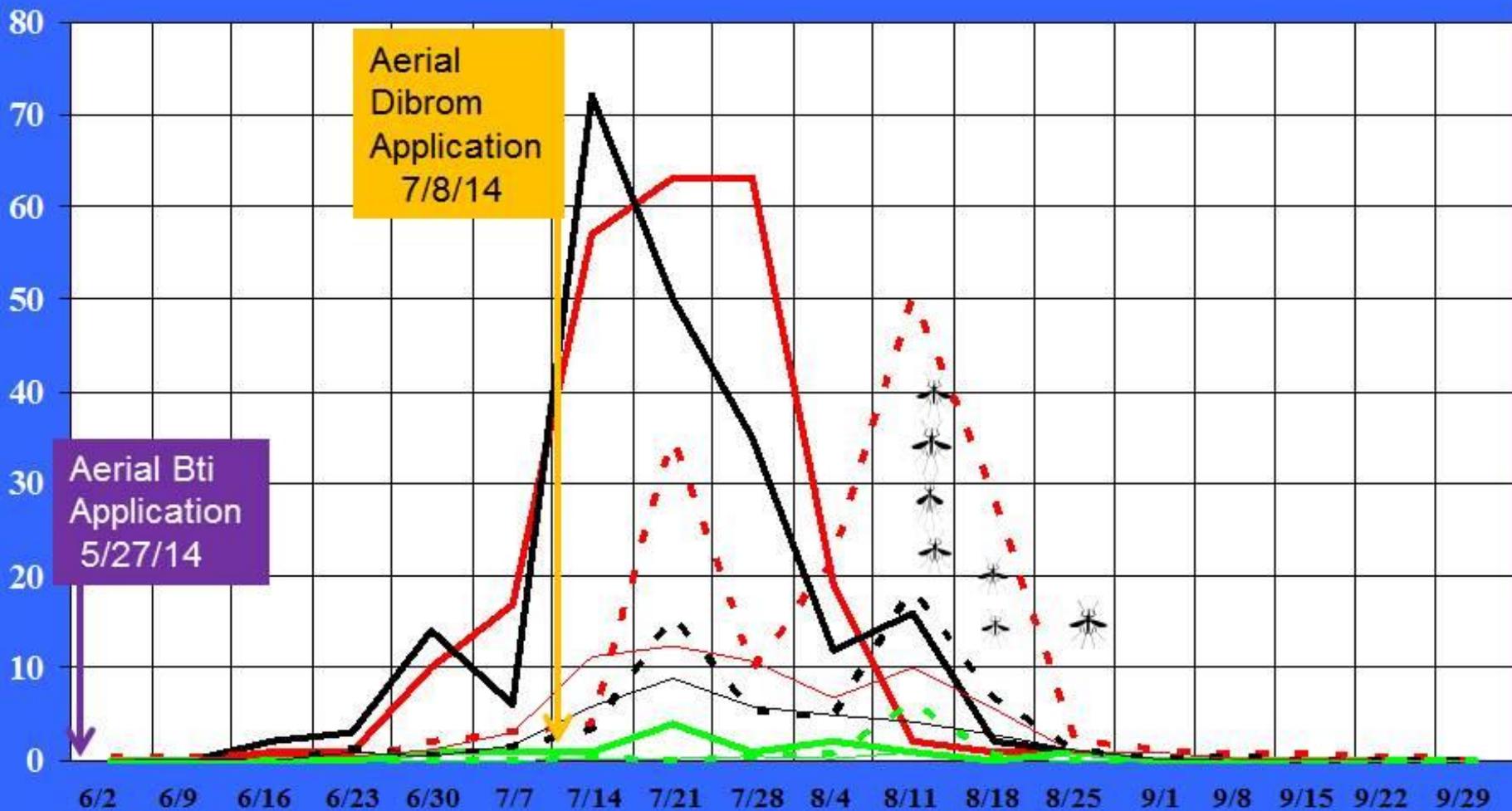
# 2003 - 2013 Vector Mosquitoes in 3 Traps



AG FARM 03		AG FARM 2013		AG FARM AVERAGE 2004-2013	
PARADISE 03		PARADISE 2013		PARADISE AVERAGE 2004-2013	
CEMETERY 03		CEMETERY 2013		CEMETERY AVERAGE 2004-2013	

Last Year

# 2003 - 2014 Vector Mosquitoes in 3 Traps

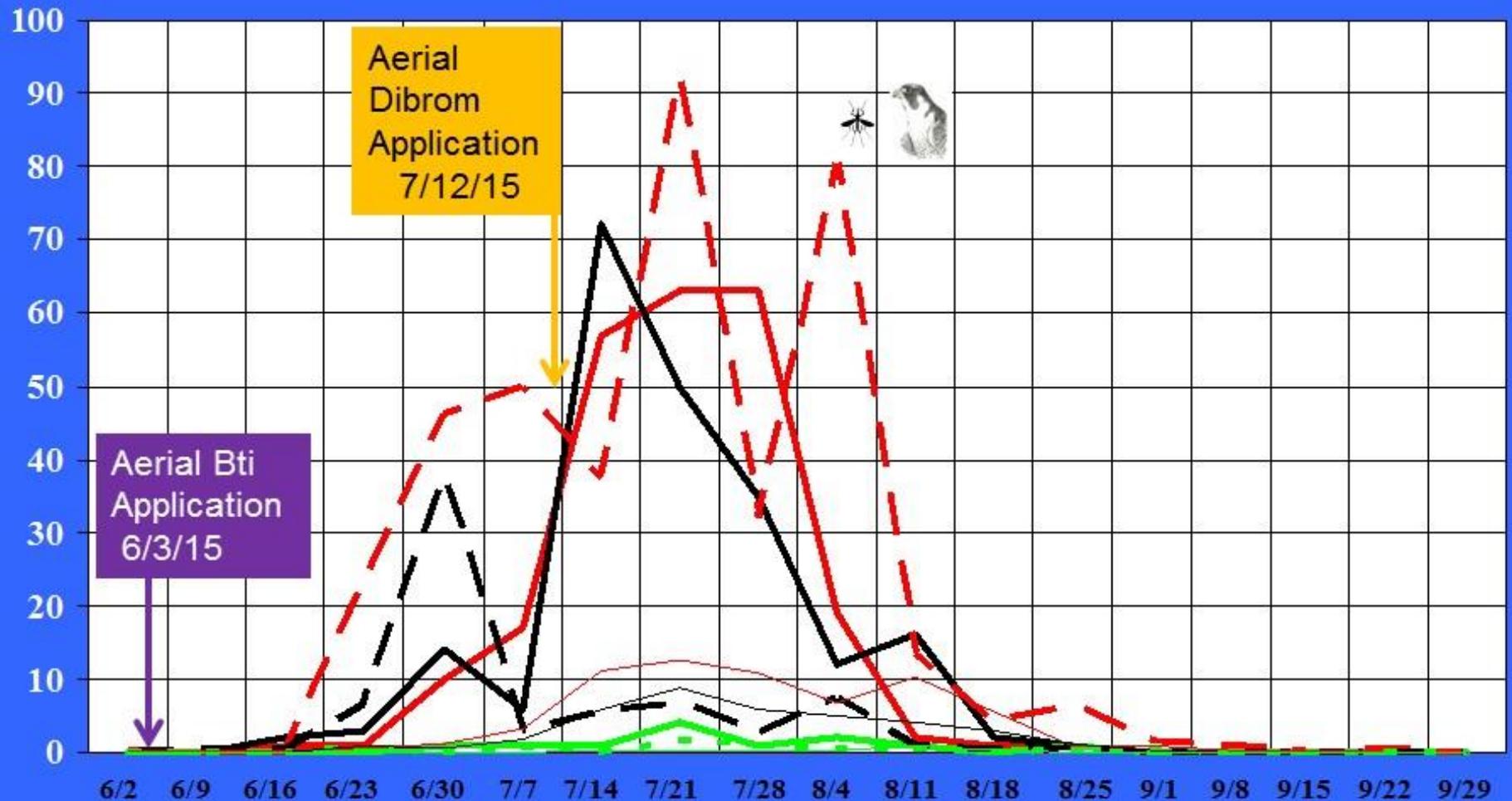


AG FARM 03  
PARADISE 03  
CEMETERY 03

AG FARM 2014  
PARADISE 2014  
CEMETERY 2014

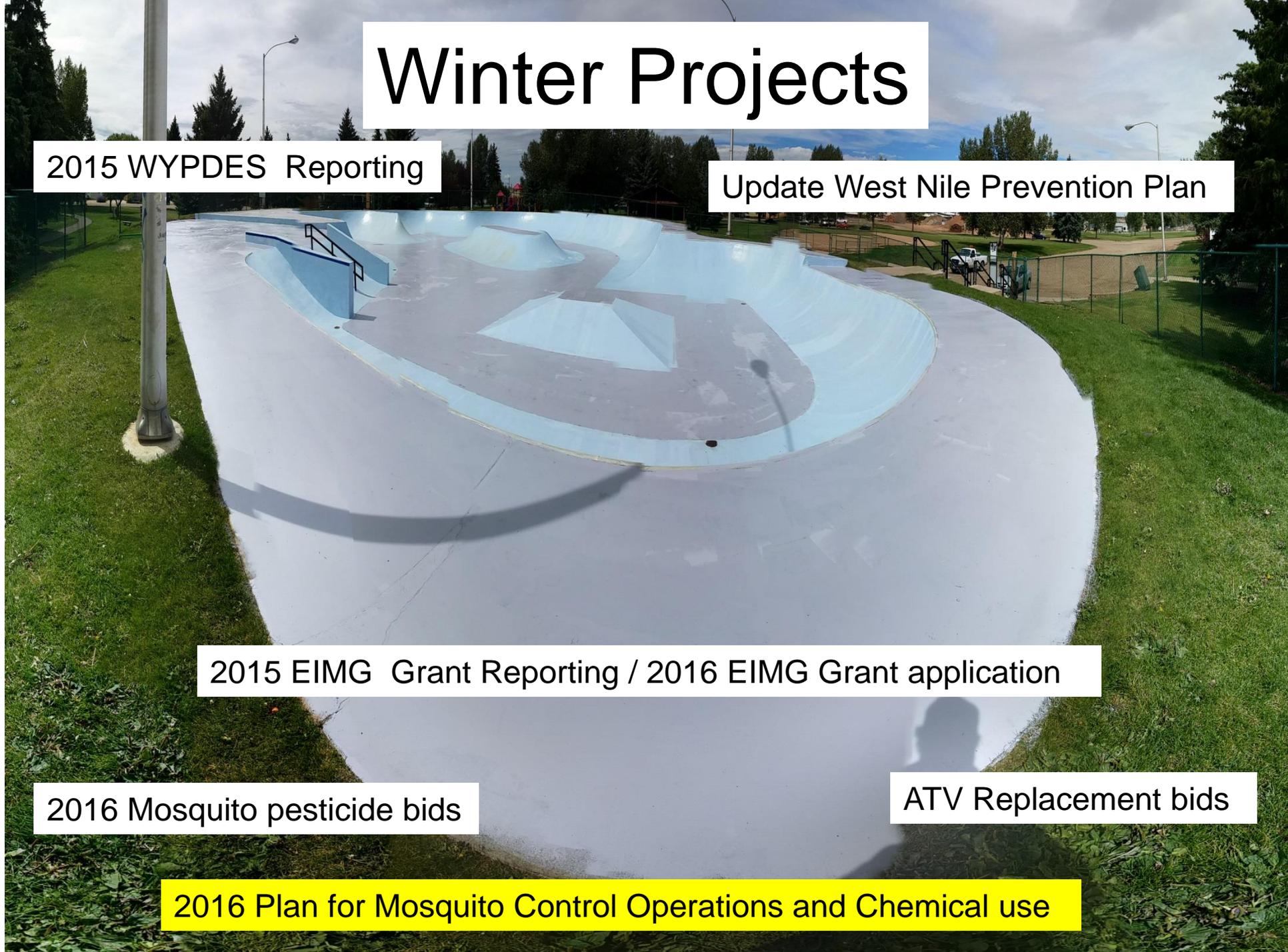
AG FARM AVERAGE 2004-2014  
PARADISE AVERAGE 2004-2014  
CEMETERY AVERAGE 2004-2014

# 2003 - 2015 Vector Mosquitoes in 3 Traps



AG FARM 03		AG FARM 2015		AG FARM AVERAGE 2004-2014	
PARADISE 03		PARADISE 2015		PARADISE AVERAGE 2004-2014	
CEMETERY 03		CEMETERY 2015		CEMETERY AVERAGE 2004-2014	

# Winter Projects



2015 WYPDES Reporting

Update West Nile Prevention Plan

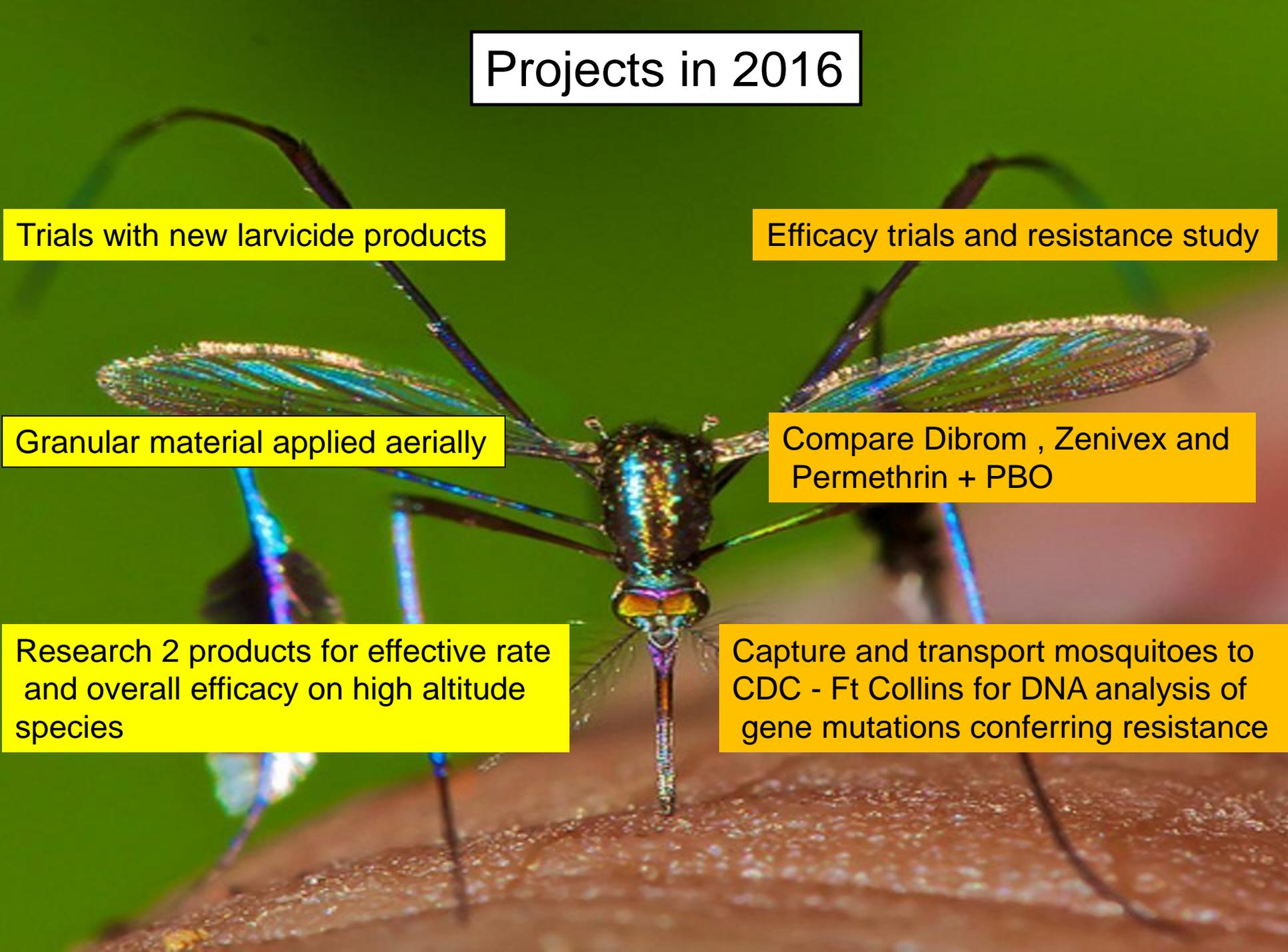
2015 EIMG Grant Reporting / 2016 EIMG Grant application

2016 Mosquito pesticide bids

ATV Replacement bids

2016 Plan for Mosquito Control Operations and Chemical use

# Projects in 2016



Trials with new larvicide products

Efficacy trials and resistance study

Granular material applied aerially

Compare Dibrom , Zenivex and Permethrin + PBO

Research 2 products for effective rate and overall efficacy on high altitude species

Capture and transport mosquitoes to CDC - Ft Collins for DNA analysis of gene mutations conferring resistance

# Questions?



## **UPCOMING COUNCIL MEETINGS January 26, 2016**

All meetings at City Hall, 406 Ivinson Street, unless noted.

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**January 22 & 23, 2016** at Holiday Inn, Conference Room

**4:30 p.m. – 7:30 p.m. – Work Session:** City Council Retreat

**8:30 a.m. – 4:00 p.m. – Work Session:** City Council Retreat

**January 26, 2016**

**6:00 p.m. – Work Session:** Public Comments

**6:00 p.m. – Work Session:** Mosquito Control Program

**6:00 p.m. – Work Session:** City Council Updates/Council Comments

**6:00 p.m. – Work Session:** Agenda Review

**6:00 p.m. – Work Session:** Public Comments

**6:30 p.m. – Public Hearing:** Mosquito Control Program

**January 28, 2016**

**6:00 p.m. – Work Session:** Ivinson Street Project

**February 2, 2016**

**6:00 p.m. – Pre-Council**

**6:30 p.m. – Regular Meeting**

**February 9, 2016**

**6:00 p.m. – Work Session:** Public Comments

**6:00 p.m. – Work Session:** Annexation & Extra-Territorial Services Policy (*tentative*)

**6:00 p.m. – Work Session:** City Council Updates/Council Comments

**6:00 p.m. – Work Session:** Agenda Review

**6:00 p.m. – Work Session:** Public Comments

**February 16, 2016**

**6:00 p.m. – Pre-Council**

**6:30 p.m. – Regular Meeting**

**February 23, 2016**

**6:00 p.m. – Joint Work Session w/County Commiss:** Community Partners Presentations  
(*tentative*)

**March 1, 2016**

**6:00 p.m. – Pre-Council**

**6:30 p.m. – Regular Meeting**

**March 10, 2016**

**6:00 p.m. – Work Session:** Public Comments

**6:00 p.m. – Special Meeting:** Community Partners Deliberation (*tentative*)

**6:00 p.m. – Work Session:** Impact Fees & the Economic Fee Initiative (*tentative*)

**6:00 p.m. – Work Session:** City Council Updates/Council Comments

**6:00 p.m. – Work Session:** Agenda Review

**6:00 p.m. – Work Session:** Public Comments

**UPCOMING COUNCIL MEETINGS January 26, 2016**

All meetings at City Hall, 406 Iverson Street, unless noted.

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**March 15, 2016**

**6:00 p.m. – Pre-Council**

**6:30 p.m. – Regular Meeting**

**March 22, 2016**

**6:00 p.m. – Work Session:** Public Comments

**6:00 p.m. – Public Hearing:** Liquor License Renewals (*tentative*)

**6:00 p.m. – Work Session:** City Council Updates/Council Comments

**6:00 p.m. – Work Session:** Agenda Review

**6:00 p.m. – Work Session:** Public Comments

**March 29, 2016**

**6:00 p.m. – Ward Meetings:**

**FUTURE CITY COUNCIL WORK SESSIONS 1/26/2015**

**Requested by Council Formal Action:**

City Curb & Gutter Policy (Paulekas)  
Review general process of Boards & Commissions Program  
(Weaver/Vitale)  
Review of Inter-Agency City/County Agreements (Hanson)  
(January/Retreat)  
UDC WAM Members Poll Results (Shuster)  
Review of funding allocation for Child Care providers (Paulekas)  
Open 311 (Summerville)  
Turner Tract Plan Update (Summerville)  
Pavement Maintenance Program (Weaver)  
ACTA (Albany County Transportation Authority)/MPO (Summerville)  
Tech Hire Grant Program (Summerville)  
Homeless/Homeless Veterans (Shumway/Summerville)  
Update on taxi laws (Summerville)

**Requested by Staff:**

\*Policy on Annexation & Extra-Territorial City Services Action Plan  
(Jordan)  
Downtown Design Guidelines Revisions (Hunt)  
Impact Fees for New Buildings/Construction (Hunt) (Fall)  
Adoption of 2015 International Fire Code (IFC) (Chief Johnson) (Jan/Feb)  
GIS CRT Software Demo (Derragon)

\* Scheduled, not held.